

**Notice of Allowability**

Application No.

10/655,565

Examiner

Duc C. Ho

Applicant(s)

O'CEALLAIGH ET AL.

Art Unit

2616

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed 09-04-03.
2. ☒ The allowed claim(s) is/are 1-2, 5-17, 19, and 21. Renumbered 1-17, respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 5-7-07.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER 'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jung Hua Kuo on 05-07-07 and 08-16-07 (for preamble of claims 14-18).

The application has been amended as follows:

In the claims:

Claims 3-4, 18, 20, and 22 are canceled.

Claim 1, line 9, after "HDLC channel", insert --- , and

the state information comprises: status bit, a current frame check sequence value, a count of the number of consecutive ones received in the currently received frame, and a count of the amount of data needed before a currently received frame will be long enough to be valid ---.

Claim 5, line 1, change "claim 3" to --- claim 1---.

Claim 10, line 15, after "HDLS channel", insert ---, and

the state information comprising: a residue of bits that fall outside a predefined byte boundary, and a count of the number of bits in the residue ---.

Claim 14, line 1, change “A computer program package embodied on a computer readable medium” to --- A computer readable medium embodied a computer program package ---.

Claim 14, line 11, after “HDLS channel”, insert ---, and  
the state information comprising: a residue of bits that fall outside a predefined byte boundary, and a count of the number of bits in the residue ---.

Claim 15, line 1, change “The computer program package of claim 14” to --- The computer readable medium of claim 14 ---.

Claim 16, line 1, change “The computer program package of claim 14” to --- The computer readable medium of claim 14 ---.

Claim 17, line 1, change “The computer program package of claim 14” to --- The computer readable medium of claim 14 ---.

Claim 18, line 1, change “The computer program package of claim 14” to --- The computer readable medium of claim 14 ---.

Claim 19, line 2, after “time”, insert --- , and to comprise an HDLC coprocessor for locally storing state information for each HDLC channel being processed, and for retrieving the stored state information for a given HDLC channel and using the retrieved state information to resume processing of the given HDLC channel ---.

Claim 21, line 11, after “HDLC data”, insert --- , the HDLC coprocessor is further configured to:

obtain raw data;

encapsulate the raw data into HDLC frames;

and pass the encapsulated data to a component of the network processing engine for transmission over a network ---.

***Reason for Allowance***

2. Regarding claims 1-2, and 5-9, the prior art fails to teach or suggest a method for processing HDLC data, the method comprises a step of using the retrieved third state information to resume processing of the second HDLC channel, and the state information comprises: status bit, a current frame check sequence value, a count of the number of consecutive ones received in the currently received frame, and a count of the amount of data needed before a currently received frame will be long enough to be valid, in combination with other limitations, as specified in the independent claim 1.

Regarding claims 10-17, the prior art fails to teach or suggest a network processing engine comprising using the retrieved third state information to resume processing of the second HDLC channel, the state information comprising: a residue of bits that fall outside a predefined byte boundary, and a count of the number of bits in the residue, in combination with other limitations, as specified in the independent claims 10, and 14.

Regarding claim 19, the prior art fails to teach or suggest a network processing engine comprising an HDLC coprocessor for locally storing state information for each HDLC channel being processed, and for retrieving the stored state information for a given HDLC channel and using the retrieved state information to resume processing of the given HDLC channel, and a count of the number of bits in the residue, in combination with other limitations.

Regarding claim 21, the prior art fails to teach or suggest a system comprising an HDLC coprocessor, the HDLC coprocessor being configured to: obtain the chunks of HDLC data for each channel from said network processing engine; and the HDLC coprocessor is further configured to: obtain raw data; encapsulate the raw data into HDLC frames; and pass the encapsulated data to a component of the network processing engine for transmission over a network, in combination with other limitations.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached on (571) 272-3134.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

  
Duc Ho

05-07-07